Advances in Developing a Science Communications Curriculum, Communications Tools and Best Practices in the Department of the Environment, Canada

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Abstract

Canadians have an increasing interest in science topics associated with nature and the environment. Interpreting and communicating scientific information is vital to Environment Canada (EC)'s mandate. According to public opinion polling, scientists are EC's most trusted spokespeople. In the context of a long-standing policy for specialists to be the Department's spokespersons, the Department needed to foster communications skills for scientists and also develop better links between communicating scientists and departmental communications staff. In December 1998 we developed a groundbreaking pilot training course for a dozen up-and-coming scientists with interest and aptitude for communications. The pilot was particularly effective in involving communications personnel from across EC so as to build linkages between the two constituencies. The course was very successful, produced a suggested curriculum for future courses, and provided a baseline for the development – by a group of federal science Departments including EC – of further pilot workshops.

An external Advisory Board developed a Science Communications Framework for EC, concluding there was a "need to make popular communications a high priority" *(http://www.ec.gc.ca/scitech/management/ communicationframework_e.htm)*. There are a number of other diverse "best practices" emerging across EC. These include various products, using different media, targeted to both general and specialised audiences. With input from both the science community and communications specialists, EC has emerged as a leader, among Canadian federal science Departments, in the science communications field.

Budget

For communications training pilot course:

Environment Canada invested $50K (Canadian) plus costs of participants travel. A four-person organising committee spent a substantial part of their time, over and above their normal duties, organising the course and producing a final report. Total amount included translation costs (English to French) and report production. Cost per participant of subsequent risk communications training course – delivered by external contractors - is ~$1.2K (Canadian) per participant.

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A Communications Curriculum Toolkit

The pilot communications-training course involved a dozen EC scientists together with equal numbers of communications personnel and resource specialists/trainers. Course elements included:

- A comprehensive resource binder and draft curriculum
- Media Training
- Mentorship by EC Communications "Masters," and
- A blue ribband media panel

Intensive evaluation of the course allowed us to build a "road map" for future training sessions, including: various logistic considerations (such as selection criteria for candidates), guidelines for presenters, course location, resource materials etc.

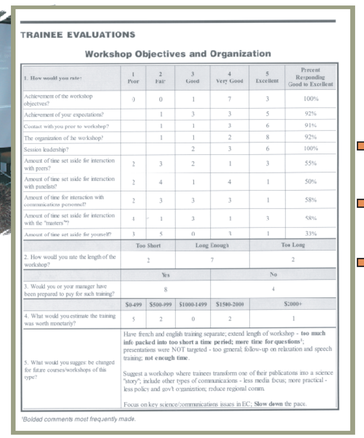
A revised three-day curriculum included core sessions on:

- The Communications Environment,
- Science and Communications,
- Science and Media/Panel Discussion,
- Science and the Written Media,
- Media Relations Training

Core sessions were complemented by auxiliary presentations including:

- Sharing Science with Communities,
- Communicating Science to Northern and Aboriginal Communities,
- Marketing the Message: Who's the Audience?,
- Communicating Science to Other Cultures and Language Groups, and
- "Lessons from the Masters."

Our approach – which included development of an extensive toolkit for future use - provided a baseline for applying the lessons learned across science departments (or other science-based institutions) with a goal of fostering collaborative communications of science. Building on concepts developed by EC, further pilot courses in "Risk communication media training" - intended as a basis for a co-ordinated training program - were developed co-operatively by a group of federal science Departments in early 2001. Furthermore, EC-Regional staff have been active in helping develop training courses involving students in the fields of Journalism, Public Relations and Science.



TRAINEE EVALUATIONS

Workshop Objectives and Organization

1. How would you rate:	1 Poor	2 Fair	3 Good	4 Very Good	5 Excellent	Percent Responding Good to Excellent
Achievement of the workshop objectives?	0	0	1	7	3	100%
Achievement of your expectations?		1	3	3	5	92%
Contact with you prior to workshop?		1	1	3	6	91%
The organization of he workshop?		1	1	2	8	92%
Session leadership?			2	3	6	100%
Amount of time set aside for interaction with peers?	2	3	2	1	3	55%
Amount of time set aside for interaction with panelists?	2	4	1	4	1	50%
Amount of time for interaction with communication persons?	2	3	3	3	1	58%
Amount of time set aside for interaction with the "masters"?	1	1	3	1	3	58%
Amount of time set aside for yourself?	3	5	0	3	1	33%

2. How would you rate the length of the workshop?	Too Short	Long Enough	Too Long
	2	7	2

3. Would you or your manager have been prepared to pay for such training?	Yes	No
	8	4

	$0-499	$500-999	$1000-1499	$1500-2000	$2000+
4. What would you estimate the training was worth monetarily?	5	2	0	2	1

5. What would you suggest be changed for future courses/workshops of this type?
Have french and english training separate; extend length of workshop – too much info packed into too short a time period; more time for questions; presentations were NOT targeted - too general; follow-up on relaxation and speech training; not enough time.
Suggest a workshop where trainee transform one of their publications into a science "story"; include other types of communications - less media focus; more practical - less policy and gov't organization; reduce regional comm.
Focus on key science/communications issues in EC. Slow down the pace.

Bolded comments most frequently made.

100% of trainees and communicators felt the course was useful and rated it as good to excellent.

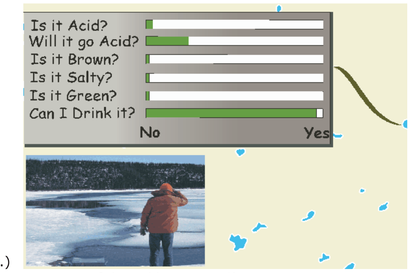
- Participants overall recommend more time for dialogue, questions and interactions.
- Real-life practical applications need to be explored more thoroughly in future courses.
- Consideration should be given to trainees visiting newsrooms.

Other Best Practices

Apart from the communications training already described, a number of other best practices have emerged.

These include:

- EC's National Water Research Institute requires scientists to provide a Management Perspective AND an Abstract with all scientific manuscripts. (The Management Perspective provides a brief summary of the study in plain language and explains the importance of the findings for programs and policies, as well as noting the intended audience.)
- EC-Regional staff are developing a "hot leads" science-story website for use by journalists.
- EC-Atlantic's Integration and Interpretation Section is an acknowledged leader nationally in developing a variety of targeted multi-media and on-line products to better disseminate science results. (These include innovative and far-from-traditional methods for making presentations to aboriginal groups (see "The Ashkui Project" poster by Geoff Howell and Alex T. Bielak.)



A portion of the Ashkui Water Chemistry Poster

At the national level, Environment Canada's communication and science teams have developed a family of diverse products to bring science and technology to Canadians. Many of these are tracked for media pickup resulting from each of them.

They include:

Science and Environment Bulletin *(http://www.ec.gc.ca/science/splash.htm)*

A bimonthly, 8-page print and on-line publication, brings Environment Canada's leading-edge science and technology to Canadians and the world in a topical, fact-driven manner.

Enviro Tipsheet *(http://www.ec.gc.ca/tipsheet/index_e.htm)*

A biweekly series of 4-5 story ideas, faxed to media across Canada, which also features 4-5 special editions during the year. The content is short, snappy, and of interest to wide variety of journalists and thus audiences. Spokespersons for science stories are always specialists and easily accessible.

EarthTones

A 20-part series of 6-9 minutes television "vignettes", showcasing federal government science activities and broadcast on the prestigious daily science magazine show, @Discovery.ca. on The Discovery Channel (the Canadian version).

Planet Update *(http://www.ec.gc.ca/pu-ec/index_e.htm)*

The radio cousin of Tipsheet, it is a monthly audio show of four 60-second stories sent by satellite, to radio stations across Canada. Popular with a wide demographic it reaches more than 100 French and English markets.

EnviroZone *(http://www.ec.gc.ca/envirozone/english/home_e.cfm)*

Environment Canada's on-line newsmagazine is produced every three weeks to give users a reliable and comprehensive place to obtain information on science and technology subjects. It blends the content of the Green Lane *(http://www.ec.gc.ca)*, the department's Internet presence, in an upbeat and informative way, with a variety of dynamic elements.

Inside Track *(http://www.ec.gc.ca/EnviroZine/english/inside_track_e.cfm)*

A feature of EnviroZine which groups Enviro Tipsheet, Planet Update and S&E Bulletin in one place to give journalists the scoop on highlights, audio files and the latest developments in environmental science and technology, as well a way to reach the right people.

Environment Canada has also produced a Science and Technology (S&T) web page dedicated to sharing information on the Department's S&T, and policies and approaches used to manage S&T *(http://www.ec.gc.ca/scitech/index_e.htm)*. The Department is also working closely with other natural resource Departments as part of a communications working group to develop and implement a plan to deepen Canadians understanding of federal research *(http://www.durable.gc.ca/group/group2/index_e.phtml)*.

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